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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,000	01/27/2006	Guenther Ittmann	282280US0PCT	9541

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EXAMINER	
SASTRI, SATYA B	

ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
10/30/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/566,000	ITTMANN, GUENTHER	
	Examiner	Art Unit	
	Satya B. Sastri	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/27/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to application filed on January 27, 2005. Preliminary amendment dated 1/27/06 is made of record. Claims 1-4 are now pending in the application.

Specification

2. The specification is objected to for the following reasons:

The formula I on page 4 does not show the charge on the anion as being dependent on m. Additionally, based on the inventive product description in the specification (pages 7-8), the formula as shown on page 4 is inferred to be a derivative of a phosphate. Given that the compound is prepared from monoalkyl- or dialkyl phosphate, the oxygen atom in the formula should have a subscript 4 and not 3.

The use of the trademarks (Plexiglas® GS on page 1, line 21 and Zelec ® on page 8, line 9) has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Objections

3. Claims 1, 3, 4 are objected to the for the following reasons:

In claims 1 and 4, there should be an "or" between the last two alkyl groups that define R^1 and R^2. Additionally, the claim language may be amended for clarity by (1) replacing the phrase "methyl methacrylate mixtures" by "monomer mixture comprising methyl methacrylate" or an equivalent phrase and (2) providing a structure for the compound with Formula (I) to show the actual bonding of alkyl groups.

With regard to claim 3, it is not clear as to how the claim limits claim 1. Instant claim provides a description of the intended use of the release agent. Additionally, the claim may be amended to delete the phrase "polymerizable monomers" or "monomer mixture".

In claim 4, the preamble recites a plastics molding composed of (meth)acrylates and other copolymerizable monomers where as the body of the claim recites cast polymerization of methyl methacrylate mixtures.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As noted above in paragraph 2, Formula I in claims 1 and 4 appears to be inconsistent with the product description on pages 7-8 and working example 1 (page 8). Given that the compound is derived from the reaction of a monononyl- and dinonyl phosphate and

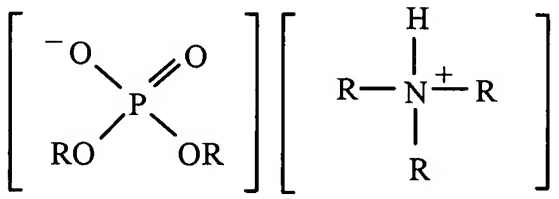
triethylamine (page 9, lines 20-39), the oxygen atom in Formula I should have a subscript of 4 and not 3. Furthermore, the charge on the anion is a function of m.

Claim 3 recites the limitation "the polymerizable monomers or monomer mixture composed of (meth)acrylates..." in the body of the claim. There is insufficient antecedent basis for this limitation in the claim.

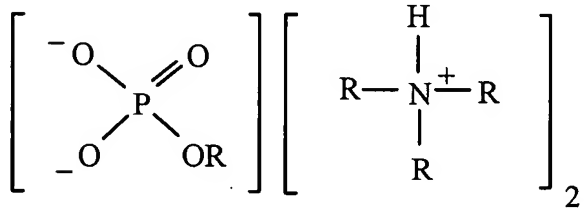
Claim 4 is confusing because the claim language recites two transitional phrases - "composed of" and "comprising".

Claim Interpretation

6. As noted above in paragraphs 2 and 5, Formula I recited in claims 1 and 4 appears to be incorrect. The general structures of compounds represented by formula I are interpreted by the examiner to be I and II as shown below:



(I)



(II)

With regard to claim 4, examiner interprets the claim as a plastics molding composed of (meth)acrylates and other copolymerizable monomers and additionally comprising the compound of formula I.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned

with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claim 4 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 3 of copending Application No. 10/528,178 to Ittmann (published as US 2006/0155048 A1). Although the conflicting claim is not identical, it is not patentably distinct from the copending claim for the reasons given below:

Copending claim discloses a molding produced using a compound with formula I. Given that the compound with Formula I (as recited in claim 1) is identical to that recited in instant claim and given that the copending claim to a molded product is generic to any plastic molding, it is broader in scope and thus, encompasses the scope of the presently cited claim.

This is a provisional obviousness-type double patenting rejection because the conflicting claim has not in fact been patented.

9. Claim 4 is directed to an invention not patentably distinct from claim 3 of commonly assigned copending Application No. 10/528,178 to Ittmann (published as US 2006/0155048 A1). Specifically, see the discussion set forth in paragraph 8 above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302).

Commonly assigned 10/528,178, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

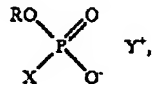
> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krieg et al. (US 5,690,872) in view of Haas et al. (US 6,471,905 B1).

The prior art to Krieg et al. discloses the method of production of filled polymethyl methacrylate based plastics by cast polymerization in cast molds (abstract, col. 5, lines 49-56), working examples). The cast resin suspension contains internal and/or external release agents which prevent the adherence of cast resin molded articles. Examples of internal release agents are fatty acids and their alkali and alkaline-earth metal salts and alkyl phosphates and their neutralized derivatives (col. 5, lines 38-47).

The prior art is silent with regard to use of quaternary ammonium salts of alkyl phosphates as release agent during cast polymerization.

Secondary reference to Haas et al. discloses improved internal release agents based on particular ammonium or metal salts of phosphoric acid esters, ammonium salts or carboxylic acids and/or ammonium salts of sulfonic acids for producing polyurethane molded objects (abstract). Disclosed compounds include ammonium salts of phosphoric acid ester of formula I:



wherein R stands for a C_1-C_{10} alkyl group, X denotes OR^1 with R^1 being equal to R or O^-Y^+ and Y stands for NH_4 or $N(R^2R^3R^4R^5)$, wherein R^2 to R^5 may be the same or different and denote hydrogen or C_1-C_{10} alkyl group (col. 2, lines 1-18). Thus, the secondary reference recognizes the functional equivalency of the metal salts of phosphoric acids esters and quaternary ammonium salts of phosphoric acid esters as internal mold release agents. Therefore, those skilled in the art would have found it obvious to utilize quaternary ammonium salts of phosphoric acid esters of Haas et al. in lieu of neutralized derivatives of alkyl phosphates of Haas et al., based on their art recognized equivalence with a reasonable expectation of success during cast polymerization of

methyl methacrylate. In the instant case, substitution of functionally equivalent internal release agents metal salts of phosphoric acids esters and quaternary ammonium salts of phosphoric acid esters requires no express motivation, as long as the prior art recognizes equivalency. *In re Ruff* 118 USPQ 343 (CCPA 1958).

In the rejection set forth above, it is the examiner's position that neutralized derivatives of alkyl phosphates read on metal salts of alkyl phosphoric acid esters.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satya Sastri at (571) 272 1112. The examiner can be reached on Wednesdays and Fridays, 7AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached at (571) 272 1114.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Satya Sastri

SATYA SASTRI

October 10, 2007